

ABSTRACT OF THE DISCLOSURE

An inexpensive rolling bearing is proposed which can be used stably for a long time even for applications where the lubricating conditions are severe or bending stresses act. Inner and outer rings of rolling bearings mounted in a rocker arm of an automobile are made of high-carbon chrome bearing steel. They are subjected to heat treatment in which after carbonitriding, high-temperature tempering is carried out. Then they are induction hardened to impart resistance to material quality change and a compressive stress of not less than 200 MPa to the surface layer, thereby markedly improving the rolling contact fatigue life and the tension-compression fatigue strength while keeping the material cost as before. Thus, this bearing can be used stably for a long time even though it is a full compliment type, lubricating conditions tend to worsen and the outer ring is repeatedly subjected to bending stress from the cam.